

## REMARKS

The indicated allowability of claim 13 is greatly appreciated. The missing formula has been re-inserted into claim 13.

The Examiner in the advisory action referred to the two estimates as *disparate*. The applicant assumes that it is this alleged disparateness that made the Examiner reject claim 9 based on the extremely broad interpretation of the term *greater*. The applicant, however, would like to refer the Examiner to the wording of the claim where the two estimates are recited as *two demand estimates of effective bandwidth for two different timescales*.

It is easy to note that, in both cases, it is *bandwidth demand* that is estimated. This means that claim 9 requires that the greater of the two bandwidth demand estimates is used. When one estimate gives *bandwidth demand* and the other estimate gives *bandwidth demand*, it is not correct to say that the two estimates are disparate. Although the two estimates are referred to as a *short-term burstiness* and a *long term variance between traffic envelopes*, the claim itself makes it sufficiently clear that both these estimates are just bandwidth demands.

The difference between these two estimates is the timescale over which the estimation is carried out. The results of the two estimations will be expressed in the same units, that is, unit of data per unit of time (e.g., bit/s, kbit/s, Mbit/s). When these estimates are known, determining which one is greater is not a problem, and clearly would not be a problem for a person skilled in the art. These two estimates are not apples and oranges, and the greater of the two can be easily determined.

Therefore, the overly broad interpretation of the word *greater* taken by the Examiner is not justified, and clearly should *not* extend to a value of a parameter being greater than a threshold assigned to this parameter.

Further, in the advisory action, the Examiner described applicant's arguments relating to combining the teachings of Giroux, Qiu and Davis as not persuasive. In this advisory action, the Examiner contended that by teaching a data rate slowdown request signal being generated in response to both large error bursts and lower levels of errors that are sustained over an extended time period that "*Davis is measuring demand in the form of a data rate, and is measuring when a data rate is too high by using error counts*". Applicant respectfully submits that this quoted part, copied from the advisory action, is not supported by any evidence.

Indeed, when Davis is analyzed more carefully, it is clear that there is ***no bandwidth demand measured or estimated***. When one of the thresholds is exceeded, the data rate is reduced. Davis is ***silent*** about what was the bandwidth demand before the slowdown request signal is generated, and what is the bandwidth demand when the slowdown is executed.

This is because when the error rate exceeds an acceptable level, one of the ways of mitigating this problem is to reduce the data rate. This is irrespective of the current data rate. If one of the thresholds for error count is, e.g.,  $1 \times 10^{-6}$ , and if the measured error count is  $1 \times 10^{-5}$ , then the threshold will be exceeded and, according to the teaching of Davis, the data rate will be reduced following the generation of the slowdown request signal. It is irrelevant, however, if the data rate before the slowdown was 100Gbit/s or 100Mbit/s. What is important is the error count. As a way to mitigate this problem, Davis teaches data rate reduction.

All a person skilled in the art would learn from Davis is that when one of the thresholds is crossed, then a data rate slowdown should be implemented. If, however, this skilled person would like to know what is the bandwidth demand, then the skilled person would have to use some other method, because this is ***not*** taught by Davis.

Moreover, Davis teaches large error bursts and lower levels of errors for each of these associated thresholds. However, when data rate reduction is concerned, there is *no* differentiation and, if either of these thresholds is crossed, then the data rate deduction is executed. It has *nothing* to do with the *two demand estimates of effective bandwidth for two different timescales*, as recited in claim 9. The only similarity is in the use of two different timescales. However, the parameters associated with these two different timescales are very different.

The Examiner contended that a person skilled in the art could [*sic*] combine such *data rate demand measurements* of Davis with the teachings of Giroux and Qiu. First, there is *no* explicit or implicit teaching of *data rate demand* in Davis. Data rate is only mentioned in the context of data rate slowdown, but, for this, the data rate and its value is irrelevant (i.e., whatever the data rate is, it will be reduced).

Second, the only measurement described in Davis is that of *error count*, and Davis fails to disclose any relationship between *error count* and *bandwidth demand*. Therefore, even if a person skilled in the art would know the error count, it would be impossible to say what is the bandwidth demand.

Third, as mentioned in our previous reply, Giroux and Qiu are not concerned with error counts and, in consequence, Davis does not solve any problem discussed by Giroux or Qiu. Showing that a skilled person *could* combine is not enough to show obviousness, and clearly there is no evidence to support the contention that he or she *would* combine Giroux and Qiu with Davis.

In consequence, if Giroux, Qiu and Davis were combined, the resulting solution still fails to disclose a *greater of two bandwidth demand estimates giving an estimated worst case*

*effective bandwidth demand.* Claim 9, as well as claim 16, and the dependent claims are therefore new and non-obvious.

Allowance of the pending claims is respectfully requested.

Petition is hereby made for a one-month extension of the period to respond to the outstanding Official Action to March 25, 2010. The Commissioner is authorized to charge \$130.00, as the Petition fee, any additional charges, or any overpayment, in connection with the filing of this response, or any such deficiency, or credit any such overpayment, to Deposit Account No. 11-1145.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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